brought to the surface and chipped into implements on the spot, as indicated by the numerous spoil heaps or "floors," of which fourteen were examined.

Both in the spoil heaps and in the earth filling the shafts numerous flint implements were collected, and the chief forms are described, with fine illustrations, by Mr. Reginald A. Smith. None are polished, but some of them (Fig. 2) are of the typically Neolithic pattern, while others (Fig. 3) are more suggestive of the Palæolithic period. One is noted as being "a not uncommon type in the period of La Madeleine"; one resembles "the tapering portion of a Chelles *ficron*"; another has a "facetted butt in the Northfleet style"; others "cannot be matched anywhere but in Le Moustier deposits"; while at least two can only be compared with implements from St. Acheul. A typical Celt-like Neolithic implement "might well be regarded as an intruder" if the position of its discovery had not been known, and if a second exactly similar specimen had not been met with.

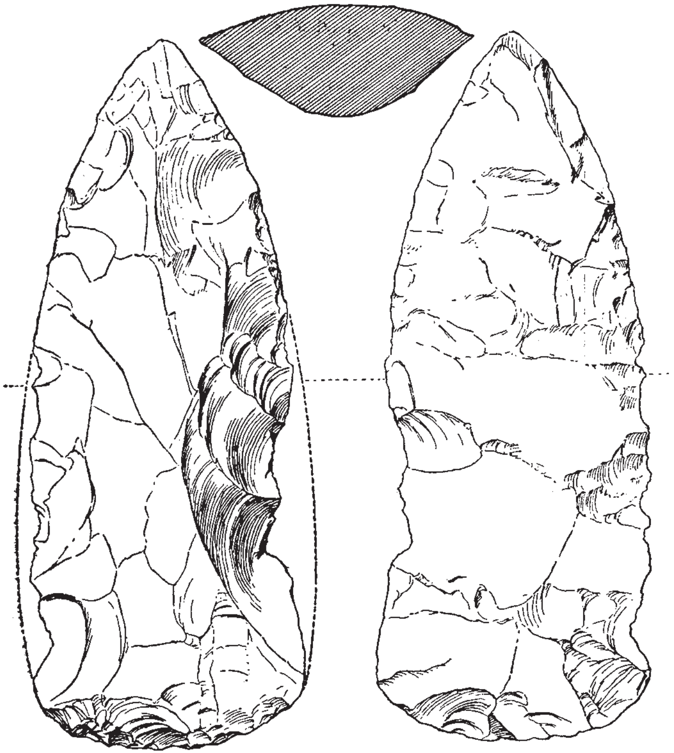

FIG. 2.—Celt-shaped flint implement, both faces and section, two-thirds natural size.

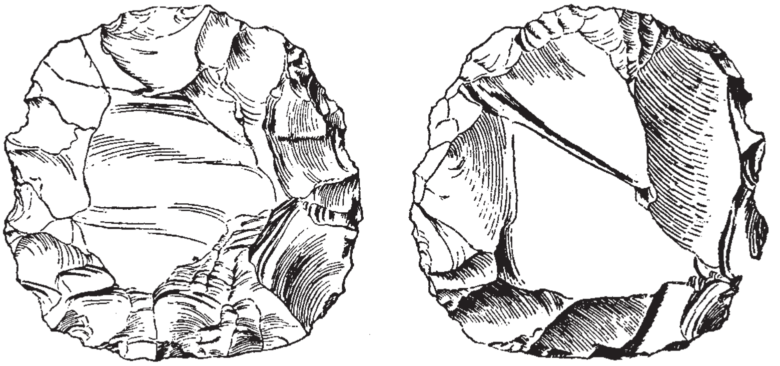

FIG. 3.—Disc-shaped flint implements, both faces, one-half natural size.

A geologist examining these implements would date them by the latest or Neolithic types which have never hitherto been found in Europe with the Pleistocene fauna. It is therefore very interesting to note that they are associated with pottery, with human remains of present-day type, with bones of animals which have either survived in this country until historic times or are still living, and with shells which are all of existing species. The charcoal found in the same deposits includes wood of the beech, which Mr. Clement Reid has never found in any undoubted Pleistocene formation in Britain. Local circumstances may have changed a little since the mines were worked, as suggested by the shells, which seem to indicate a moister climate than that of the present day; but the whole assemblage of remains is such as might have accumulated at any time between the Neolithic and the Historic period. A valuable account of similar flint mines in Sweden, appended to the report by Dr. N. O. Holst, leads to the conclusion that they were "worked, with or without a break, from the later portion of the Neolithic Age down to the Early Iron Age." The new excavations thus confirm and extend the results of Canon Greenwell already mentioned. The Prehistoric Society of East Anglia is to be congratulated on the thoroughness with which it has accomplished its task, and on the admirable manner in which it has published its detailed report. A. S. W.

THE UNIVERSITIES AND THE WAR.[1]

TO discuss the principles and results of British education is perhaps not inappropriate at a time when the Empire is on its trial. For, next to racial soundness, education is an Empire's greatest asset. The issue of this war will certainly bring out new features of difference between the educational ideals of the chief groups of belligerents, and will develop no less certainly new cultural values. What those who take an interest in education probably will look for most is a strengthening and broadening of its scientific basis. No lesson has been more forcibly inculcated by the

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[1] "The Yearbook of the Universities of the Empire, 1915." Published for the Universities Bureau of the British Empire. Pp. xiv+717. (London: Herbert Jenkins, Ltd., n.d.). Price 7*s*. 6*d*. net.

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war than the vital necessity, for national prosperity and national existence, of the organisation of applied science. Education may be said to be permanently in a state of transition, and this is to the good. Without change there is no development; without change there is only decay. Those who received, a quarter of a century ago, the standard classical education of a public school, now know that it was only a caste-system, suitable only (and that, too, only by prejudice) as a quasi-literary and so-called character training, for the barrister and the politician.

The growth of universities in recent years throughout the Empire, having as their main function the teaching of science, is the most hopeful feature of the present period of transition. *Ars longa, vita brevis;* the accumulation of important knowledge, year by year, to be added to the sum of man's understanding and control of his environment and resources, makes the task of learner and teacher alike more and more difficult, in a geometrical progression of difficulty. Here, therefore, is an occasion for revision of methods of teaching; also for economy of study. Old subjects must be scrapped, or side-tracked as luxuries. University education, again, must obviously commence earlier. It is encouraging to note that in the majority of the new universities of the Empire the age of entrance is more and more approximated to that adopted in the days when universities were first developed, viz., about sixteen.

The second issue of the "Yearbook of the Universities of the Empire" is a very useful work of reference, especially for young men going out to the Colonies and Dominions or coming thence to the mother-country. The educationist will find in it the more important details of the university equipment of the various countries of the Empire, how it meets the special needs of particular environments which call for special studies, and what response in attendance and results is made by the various communities. The volume is also a reminder of the fact that in 1912 a congress of the universities of the Empire was held in London, and a Universities Bureau of the British Empire was formed. The committee of the Bureau has thirteen members, and fifty-four correspondents act for the fifty-four universities. The hon. secretary is Dr. Alex Hill, who has edited the yearbook since Mr. W. H. Dawson joined His Majesty's forces.

The "comparative presentations," says Dr. Hill, "will, it is hoped, enable the authorities of universities to see at a glance what is being done elsewhere. To the student they will display the fields of knowledge which the several universities especially cultivate."

The Bureau will perform a great service to the Empire if it can link up scientifically all the mechanisms of the university education into an "Imperial Chain," and thus make the way clear for a consistent and scientific development of British culture. In the numerical returns there is, as the editor points out, a difficulty in checking, owing to the length of transit from overseas.

The fifty-four universities have attached to them two hundred and forty-two colleges. Outside Great Britain, among great institutions deserving special study, are the University of Toronto (which dates from the eighteenth century); the McGill University of Montreal; the University of Adelaide; and the Universities of Allahabad, Bombay, and Calcutta. To the last-named are affiliated forty-five colleges, an example of the organisation and thoroughness of the educational system which India owes to the British *raj,* and the success of which is proved by the achievements of so many native students in science and other subjects.

As regards special lines of study, one notes the development of metallurgical instruction at Sheffield and Johannesburg, of financial and commercial instruction at Birmingham, of forestry and agricultural instruction at various Canadian universities, and of the curious preoccupation with legal studies that obtains in, for instance, the Alberta University, which has seventeen lecturers on law, but none on botany. The attention paid to medicine, surgery, and dentistry is very noticeable, as on the mechanical side is that paid to engineering and applied science generally. In theoretical and applied science, universities like Cambridge, Birmingham, Bristol, and Toronto (to name a few) are very thorough in their curricula. Some Canadian universities present local peculiarities in catering for oratory, dogmatic and apologetic theology.

Private benefactors have done much in building up this nucleus of a scientifically educated Greater Britain. Such application of wealth is scientific; the foundation of free libraries, three-fourths of their contents being ephemeral fiction, is not.

A very interesting section of the Yearbook is the War Roll, which shows very clearly how the more highly educated section of the Empire's people has responded in the most practical way to the call of duty, which after all is another name for scientific sense. The editor estimates the number of students below military age as not less than five per cent. "A considerable proportion of university students have been rejected owing to physical unfitness, especially defective eyesight." This note should receive the attention of eugenists. The only possible method of estimate was "to give the number of students of the session 1913–14 who were known to be serving with His Majesty's Forces *plus* the number of freshmen who had withdrawn for this reason." This War Roll is a list to be proud of; the proportion of members of staff is remarkable. Not less remarkable is the number of commissions obtained, which is a significant datum for a voluntary army; no less is the number of men "in the ranks." Education, as Pericles observed long ago, is the best seed-bed for patriotic service; *noblesse oblige.*

A. E. CRAWLEY.

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